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Subject:

Final Multi-Area Feasibility Study Technical Memorandum
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

Dear Mr. Saric:

On behalf of the Kalamazoo River Study Group (KRSG), please find enclosed the final version of the *Multi-Area Feasibility Study Technical Memorandum: Preliminary Permitting/Equivalency Requirements* (Permitting Tech Memo).

The Permitting Tech Memo, which was developed and submitted to satisfy the requirements of Task 1.2.2 of the Statement of Work (SOW) attached to the Administrative Settlement Agreement and Order on Consent (AOC) for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] Docket No. V-W-07-C-864), was originally submitted in February 2008. KRSG revised and resubmitted the document in June 2009 in response to comments received from U.S. Environmental Protection Agency (USEPA) and the Michigan Department of Environmental Quality (MDEQ) in May 2009. USEPA approved the June 2009 version on September 16, 2009.

If you have any questions, please do not hesitate to contact us.

Sincerely,

ARCADIS

Michael J. Erickson, P.E.
Associate Vice President

Enclosures: two copies

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Allied Paper, Inc./Portage Creek/
Kalamazoo River Superfund Site

Supplemental Remedial
Investigations/ Feasibility Studies

Multi-Area Feasibility Study Technical Memorandum:

Preliminary Permitting/
Equivalency Requirements

Kalamazoo River Study Group

September 2009





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

September 16, 2009

SR-6J

Mr. Michael J. Erickson
Associate Vice President/Principal Engineer
ARCADIS
10559 Citation Drive, Suite 100
Brighton, MI 48116

RE: Revised Multi-Area Feasibility Study Technical
Memorandum: Preliminary Permitting/Equivalency
Requirements

Dear Mr. Erickson:

The United States Environmental Protection Agency (EPA) has completed its review of the June 23, 2009, revised Multi-Area Feasibility Study Technical Memorandum: Preliminary Permitting/Equivalency Requirements for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site.

The document has adequately addressed EPA's previous comments and incorporated them into the document. Therefore, EPA approves the Multi-Area Feasibility Study Technical Memorandum: Preliminary Permitting/Equivalency Requirements.

Please contact me at (312) 886-0992 if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Saric", is located below the "Sincerely," text.

James A. Saric
Remedial Project Manager
SFD Remedial Response Branch #1

cc: Paul Bucholtz, MDEQ
Gary Griffith, Georgia-Pacific
Richard Gay, Weyerhaeuser

**Allied Paper, Inc./Portage Creek/
Kalamazoo River Superfund Site**

**Supplemental Remedial Investigations/
Feasibility Studies**

**Multi-Area Feasibility Study
Technical Memorandum:**

**Preliminary Permitting/Equivalency
Requirements**

Kalamazoo River Study Group

September 2009



Michael J. Erickson, P.E.
SRI/FS Project Coordinator



Stephen Garbaciak Jr., P.E.
Vice President

**Multi-Area Feasibility Study
Technical Memorandum:**

**Preliminary Permitting/
Equivalency Requirements**

Allied Paper, Inc./Portage Creek/
Kalamazoo River Superfund Site

Supplemental Remedial
Investigations/Feasibility Studies

Prepared for:
Kalamazoo River Study Group

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Date:
September 2009

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Acronyms and Abbreviations

ARARs	Applicable or Relevant and Appropriate Requirements
AOC	Administrative Order on Consent
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COCs	constituents of concern
CSM	Conceptual Site Model
CWA	Clean Water Act
ESA	Endangered Species Act
FS	Feasibility study
GRAs	General response actions
LWMD	Land and Water Management Division
MDEQ	Michigan Department of Environmental Quality
NOC	Notice of Coverage
NPDES	National Pollutant Discharge Elimination System
NREPA	Natural Resources and Environmental Protection Act
NSR	New Source Review
OU5	Operable Unit 5
PCBs	polychlorinated biphenyls
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
SESC	Soil Erosion and Sedimentation Control
SOW	Statement of Work
SRD	Substantive Requirement Document
SRI	Supplemental remedial investigation
TSCA	Toxic Substances Control Act
TSD	Treatment, storage and disposal
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

1. Introduction

On February 21, 2007 Georgia-Pacific Corporation and Millennium Holdings, LLC—collectively referred to as the Kalamazoo River Study Group, or KRSG—voluntarily entered into an Administrative Settlement Agreement and Order on Consent (AOC) with the U.S. Environmental Protection Agency (USEPA) that will govern the majority of work from this point forward at the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Site or Superfund Site), located in Kalamazoo and Allegan counties in southwest Michigan (Figure 1). The AOC describes a series of activities associated with supplemental remedial investigations and feasibility studies (SRIs/FSs) that will be carried out over the next several years in Operable Unit 5 (OU5) of the Site (SRI/FS AOC; Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA] Docket No. V-W-07-C-864; USEPA 2007). OU5 encompasses 80 miles of the Kalamazoo River from Morrow Dam to Lake Michigan, including a stretch of Portage Creek from Alcott Street to its confluence with the Kalamazoo River.

The Statement of Work (SOW) included as Attachment A to the SRI/FS AOC specifies supplemental remedial investigations and feasibility studies to address polychlorinated biphenyls (PCBs) in seven Areas of OU5. The seven Areas in OU5 are shown in Figure 1.

1.1 Multi-Area Feasibility Study Documents

As described in the SOW, Area-specific feasibility studies (FSs) will be developed to support Area-specific risk management. The various FS activities that will be implemented by the KRSG will include examining potential general response actions (GRAs) and evaluating remedial technologies and alternatives to address impacts to human health and the environment using a risk-management approach consistent with the *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (USEPA 2005). The FS development activities will also be performed consistent with the *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (USEPA 1988a) and *CERCLA Compliance with Other Laws Manual, Parts I and II* (USEPA 1988b; USEPA 1989a).

To guide the FS work and provide for consistency and efficiency across the seven Areas of OU5, the SOW specifies preparation of several Multi-Area FS Planning Documents as the first step in the development of the FS reports. Per the SOW, these Multi-Area FS Planning Documents are intended to “set forth general approaches and concepts with the intent of streamlining preparation of work plans and minimizing review times for future deliverables” (USEPA 2007). An additional intention is to promote a consistent approach for completion of SRI/FS activities in each Area of the Site, as appropriate. The Area-specific work plans will incorporate the Multi-Area documents by reference, with appropriate Area-specific

modifications. Area-specific modifications may incorporate potential new information on expected land use, potential advances in remedial technology, information from new studies, or other information.

The four Multi-Area FS Planning Documents developed for the Site are described below.

- **Preliminary Remedial Technology Screening** – The first FS Planning Document includes the identification of GRAs and a preliminary list of remedial technologies to address contaminated soil, sediments, and groundwater in each Area.
- **Preliminary List of Possible Applicable or Relevant and Appropriate Requirements** – The second FS Planning Document identifies a preliminary list of possible state and federal applicable or relevant and appropriate requirements (ARARs), including chemical-specific, location-specific, and action-specific ARARs as appropriate. This preliminary list of possible ARARs may apply to the circumstances and array of potential remedies at one or more Areas.
- **Preliminary Permitting/Equivalency Requirements** – This topic is the subject of this technical memorandum, which provides a preliminary analysis of likely permit or permit equivalency requirements. The preliminary analysis focuses on substantive requirements of permits that may be applicable across the Site, and includes a discussion of potential waivers, as appropriate.
- **Candidate Technologies and Testing Needs** – The fourth FS Planning Document identifies candidate technologies for a treatability studies program that, per Section 4.1 of the SOW, will cover the “range of technologies required for alternative analysis.” This memorandum includes a compilation of literature information on the performance, relative costs, applicability, removal efficiencies, operation and maintenance requirements, and implementability of candidate technologies.

These Multi-Area FS Planning Documents were developed based on the understanding that the primary constituent of concern at the Site is polychlorinated biphenyls (PCBs) and the relevant contaminated media are in-stream sediment, bank soil, floodplain soil, and groundwater.

1.2 Document Overview

This Multi-Area FS Planning Document, *Preliminary Permitting/Equivalency Requirements*, presents a preliminary analysis of likely permit or permit equivalency requirements. The

preliminary analysis focuses on substantive requirements of permits that may be applicable, and discusses potential waivers, as appropriate.

Section 2 summarizes the possible GRAs that were considered in developing the preliminary analysis of likely permit or permit equivalency requirements. The development of the GRAs is described in more detail in another Multi-Area FS Planning Document—the *Preliminary Remedial Technology Screening* (ARCADIS 2008b). Section 3 lists the preliminarily-identified technologies and associated preliminary permit or permit equivalency requirements. Section 4 provides a list of references cited in this document.

2. Possible General Response Actions

This section summarizes possible GRAs that may apply to the circumstances and array of potential remedies in one or more Areas of OU5. As stated in the USEPA's RI/FS Guidance (USEPA 1998a), GRAs are medium-based response actions that will satisfy the remedial action objectives.

The possible GRAs were developed to address Site contaminants identified in the Generalized Conceptual Site Model (Generalized CSM; ARCADIS 2009). The development and evaluation of GRAs, and a summary of the Generalized CSM is found in the Multi-Area FS Planning Document *Preliminary Remedial Technology Screening* (ARCADIS 2008a).

The possible GRAs and the implementing technologies and approaches presented in Tables 1 and 2 of the *Preliminary Remedial Technology Screening* memorandum were developed to be consistent with the guidelines and principles of the USEPA's *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (Sediment Guidance; USEPA 2005). The possible GRAs consider measures to control the contribution of potential sources of PCB (i.e., exposed sediments in the formerly impounded areas, floodplain soils, unstable impacted bank soil, and groundwater). Each of the three major sediment remediation approaches (dredging, capping, and monitored natural recovery) discussed in USEPA's Sediment Remediation Guidance (USEPA 2005) are included as possible GRAs and evaluated for the Site.

The combination of GRAs and the general technologies that may potentially be used to implement the GRAs provide the basis for the analysis of potential permit or permit equivalency requirements included in Section 3 of this memorandum. This preliminary permit or permit equivalency requirement analysis is performed with a focus on those technologies that have been evaluated and retained for the Site as a result of the preliminary technology screening process.

3. Preliminary Permitting/Equivalency Requirements

The possible GRAs are potentially subject to numerous federal, state, and local laws and regulations. A preliminary list of possible ARARs is presented in the *Multi-Area Feasibility Study Technical Memorandum: Preliminary List of Possible Applicable or Relevant and Appropriate Requirements* (ARCADIS 2008b). Some of these laws and regulations require that permits be obtained before certain activities can take place. Because the Site remedy will be performed pursuant to CERCLA, no federal, state, or local permit is required for work being performed “onsite” (42 United States Code [USC] § 121(e); 40 Code of Federal Regulations [CFR] § 300.400(e)). The USEPA interprets these provisions to exempt onsite activities from the procedural requirements of these laws and regulations; however, all work performed at CERCLA sites must comply with the substantive requirements of these laws and regulations. This section identifies the federal, state, and local laws and regulations, and describes how the remedial design and/or remedial action will satisfy these substantive requirements.

The following sections describe activities that are potentially part of the remedial action. They identify and summarize the possible relevant federal and state environmental permitting laws and regulations that would normally apply to these activities but for the CERCLA exemptions cited above. The Agencies that oversee these activities will be consulted on the specific activities to ensure that proposed activities are being conducted in a manner that is consistent with the substantive requirements of relevant permits. Implementing applicable regulations promulgated by the federal, state, or local authorities that are relevant to the potential remedial action activities for the Site establishes the procedural and substantive requirements that apply to operations subject to these applicable regulations.

As noted previously, the possible GRAs used to perform this preliminary permit or permit equivalency analysis for the Site are based on the Generalized CSM. As the CSM for each Area is refined and updated, Area-specific remedial technologies and process options will be refined and updated as well. Area-specific FS documents will then identify appropriate remedial technologies and process options specific to each Area, the federal, state, and local laws and regulations that are applicable to the remedy for each Area, and describe how the remedial action will satisfy the substantive requirements of these laws and regulations.

For the purpose of this analysis, possible GRAs and their associated impacts that may be subject to permit requirements include, but are not limited to: 1) in-stream operations including dredging, resultant sediment transport, flow diversion to facilitate implementation, backfilling/capping, and habitat replacement and reconstruction; 2) streambank and floodplain operations, including soil excavation, backfilling/capping, soil transport, bank stabilization construction, and habitat replacement and reconstruction; 3) near-stream operations, including

all construction and operations of land-based facilities for barge unloading, sediment processing/dewatering, water treatment and transport, *ex situ* sediment and soil treatment, stormwater management, sediment and soil transport (e.g., rail yard, trucking road, pipeline), and construction and operation of disposal facilities; and 4) capping, including a thin-layer of clean sediment or an engineered cap with several layers, either following dredging or in lieu of dredging.

Permitting requirements for groundwater are not evaluated as part of this document and would be evaluated in the Area-specific FS documents, if necessary.

The following sections describe different categories of remedial activities that have been identified as part of the possible GRAs for the Site, and identify and summarize the relevant federal and state environmental permitting laws and regulations that might apply to these activities. Table 1 presents a summary of possible federal and state permit or permit equivalency requirements that are associated with the possible GRAs for the Site.

3.1 Dredged or Fill Material Discharges, Capping, Disturbance of Stream Beds and Banks, and Impacts to Wetlands

Dredging, excavation, and capping in and near streams will result in disturbance of the stream bed (and potentially stream banks) and cause resuspension of sediments. Remedial construction at river bank and floodplain areas may impact wetlands and the natural habitat. Several federal and state permitting programs regulate: 1) the discharge of dredged or fill material; 2) the disturbance of stream beds, banks, and floodplains; and 3) activities that impact wetlands.

At the state level, Part 17 of the Michigan Natural Resources and Environmental Protection Act 451 of the Michigan Public Acts of 1994, as amended, (NREPA) provides the administrative guidelines for enforcing state regulated permits and other regulations. As appropriate, the state permitting authority may elect to involve local government to join a particular permitting process. Often, a Michigan Joint Permit Application is submitted for both federal and state permits (Michigan Department of Environmental Quality [MDEQ] 2005).

Dredge and Fill Permit Program—Section 404 of the Clean Water Act (CWA) requires that all discharges of dredged or fill material into the waters of the United States be permitted (33 USC § 1344). This permit program is administered by the United States Army Corps of Engineers (USACE) in consultation with USEPA and the United States Fish and Wildlife Service (USFWS). No Section 404 permit may be granted by USACE unless the affected state (or

states) certifies that the permitted activities will not violate applicable laws and regulations (Section 401, 33 USC. § 1341; CFR § 325.2(b)(1)(ii)).

Nationwide and General Permit—USACE is authorized to issue nationwide and general Section 404 permits for specific categories of activities involving the discharge of dredged or fill materials determined to have minimal adverse environmental effects (Section 404(e)(1), 33 USC § 1344(e)(1)). Relevant remedial activities that may be granted this permit include survey activities, minor road crossings, outfall structure construction, bank stabilization, and other maintenance activities.

Section 10 Permit—Section 10 of the Rivers and Harbors Act (33 USC § 403) normally mandates a permit for the excavation or filling of the channel of any navigable waters of the United States. USACE implements the Section 10 permitting program.

Inland Lakes and Streams Permit—Under the authority of Part 301 of NREPA and Section 404 of the CWA, the Land and Water Management Division (LWMD) within the MDEQ implements a permitting program to regulate construction activities on or over bottomland of inland lakes and streams (Part 301 of NREPA). Activities that require a permit under Part 325 (Submerged Lands), Part 303 (Wetlands), or Part 31 (Floodplains and Floodways) of the NREPA do not require separate permits.

Wetlands Protection Permit—A Wetlands Protection Permit is implemented by MDEQ to regulate wetlands alteration activities including dredging, filling, and developing under Part 303 of the NREPA and under federal law (Section 404 of CWA) for most parts of the state. Permit application for major projects may be reviewed by USEPA, USFWS, and USACE. Activities that require a permit under Part 325 (Submerged Lands), Part 301 (Inland Lakes and Streams), or Part 31 (Floodplains and Floodways) of the NREPA do not require separate permits.

Great Lakes Bottomlands Permit—MDEQ/LWMD has the responsibility for issuing Great Lakes bottomlands permits under the authority of Part 35 of the NREPA (Great Lakes Submerged Lands Permits). It applies to any dredging, filling, enlarging or extending of structures in Great Lakes waters or below the ordinary high water mark of a Great Lake; or connecting any natural or artificial waterway, canal or ditch with any Great Lake as well as marina construction activities.

Shorelands Protection and Management Permits—MDEQ/LWMD administers shorelands protection and management permits under the authority of Part 323 of the NREPA including: 1)

Permit for Construction in a High Risk Erosion Area, 2) Permit for Construction in a Flood Risk Area, and 3) Permit for Construction or Alteration in an Environmental Area.

Critical Dune Area Permits—MDEQ/LWMD administers permits for development, silviculture, and recreational activities that might cause contour changes or significantly alter the physical characteristics of sand dunes in a critical dune area. Part 353 of NREPA is administered under this program. Critical dune areas are present in Saugatuck Township, Allegan County around the mouth of the Kalamazoo River and in areas between Kalamazoo Lake and Lake Michigan.

3.2 Discharges of Process Water

If sediment dredging technologies are employed as part of the Site remedy, the processing facilities may generate process wastewater from the dewatering and processing of dredged sediments. Both federal and state programs set forth laws and regulations covering the discharge of processed water.

National Pollutant Discharge Elimination System (NPDES) Permit and Pretreatment Permit—Section 301 of the CWA establishes a program to oversee the discharge of pollutants in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions (Section 301(a), 33 USC § 1311). The NPDES permit program authorizes and regulates discharges from point sources to the waters of the United States in compliance with the Act. Pursuant to Section 402 of the CWA (33 USC § 1342), USEPA has authorized the state of Michigan to issue permits and establish requirements for such discharges. Thus, these discharges are regulated by MDEQ under Part 31 of the NREPA. Under these regulations, permits for such discharges are required to include effluent limits and conditions, taking into account available technology to treat such wastewater and applicable water quality standards. Pursuant to the CWA, discharges to publicly owned treatment works must meet the standards or provide pretreatment under 40 CFR Parts 136 and 403.

MDEQ utilizes "Permit by Rule" for NPDES authorization. "Permit by Rule" denotes that permit requirements are stated in a formally promulgated administrative rule. A facility requiring coverage under a "Permit by Rule" must abide by the provisions written in the rule. Instead of applying for an NPDES permit, the facility submits a Notice of Coverage (NOC) form. Facilities that are determined to be eligible to be covered under a general permit receive a Certificate of Coverage.

For onsite remedial action associated with a CERCLA cleanup, a NPDES permit is not required. Instead, MDEQ administers a Substantive Requirement Document (SRD) in accordance with Section 121(d) of CERCLA, Part 31 (Water Resources Protection or

Floodplains) and Part 41 (Sewerage Systems) of NREPA, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18. A SRD will set forth specific substantive requirements for the discharge of processed water generated from onsite remedial activities.

3.3 Discharge of Stormwater

Remedies for the Site are likely to disturb land and cause temporary soil erosion and sediment runoff; therefore, they are likely subject to the federal and state requirements regulating soil erosion and sediment for construction activities.

Soil Erosion and Sedimentation Control (SESC) Permit—Pursuant to Section 402 of the CWA, USEPA has authorized MDEQ to issue permits and establish requirements for discharges of stormwater associated with construction and industrial activities. MDEQ has, pursuant to Part 91 (Soil Erosion and Sediment Control) and Part 31 (Water Resource Protection) of NREPA, established permitting and substantive requirements that apply to stormwater discharges during both the construction and operation of sediment and water processing facilities. MDEQ administers the NPDES Storm Water Program in the state of Michigan utilizing the “Permit by Rule.” Construction activities disturbing one to five acres of land with one point source discharge to waters of the state currently must comply with the Phase II NPDES Storm Water Program. Construction activities disturbing five acres or more with a point source discharge to waters of the state are required to submit a NOC to obtain coverage under “Permit by Rule.” Prior to submitting the NOC, a SESC Permit must be obtained from the local authorities (i.e., city or county government).

The SESC permit typically requires the discharger to prepare and implement a SESC Plan in accordance with sound engineering practices. The SESC Plan should identify the potential sources of pollution expected to affect the quality of stormwater discharges, and describe and ensure the implementation of practices to reduce the potential for pollutants in stormwater discharges, including erosion and sediment control practices and stormwater management. The “Permit by Rule” program requires a certified stormwater operator to operate the erosion controls and mandates weekly and post-precipitation inspections (within 24 hours of the precipitation event) at the construction site. The required inspections must be carried out until the permit expires or is terminated by the issuing authority.

3.4 Hazardous Waste Characterization, Storage, Transport, and Disposal

Under the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments of 1984, Congress has mandated the handling of hazardous waste so as to minimize the present and future threat to human health and the environment. RCRA

(42 USC § 6901 et seq.) establishes a regulatory program governing the characterization, generation, treatment, storage, disposal, and transportation of hazardous waste. Under this program, treatment, storage and disposal (TSD) facilities are required to apply for and obtain permits (42 USC § 6925), and USEPA has adopted regulations governing the identification, generation, accumulation, transportation, treatment, storage, and disposal of hazardous waste.

TSD Permitting and Licensing—Pursuant to Section 3004 of RCRA, TSD facilities are required to comply with performance standards, including statutory minimum technology requirements, groundwater monitoring, air emission controls, corrective actions, and prohibitions on the land disposal of untreated hazardous wastes. Section 3005 of RCRA requires owners and operators of TSD facilities to obtain permits that set the conditions under which they may operate. Section 3006 of RCRA authorizes states to assume responsibility for carrying out the RCRA program. The Hazardous Waste Management Unit of the Waste and Hazardous Materials Division within MDEQ has the responsibility for issuing operating licenses for TSD facilities.

As part of the SRI and FS processes for each Area, waste characterization will be performed to determine the applicability of the federal RCRA regulations. Specifically, the Toxic Characteristic Leaching Procedure or Synthetic Precipitation Leaching Procedure test will be performed on representative Site waste samples to determine whether a waste is subject to the RCRA requirements. Under Michigan's regulation for hazardous waste management or Part 111 of NREPA, all dredged materials, as defined in 40 CFR 232.2 and that are subject to the requirements of a permit that has been issued pursuant to Section 404 of the CWA, are not a hazardous waste.

In addition, Section 6(e) of the Toxic Substances Control Act (TSCA) (15 USC § 2605(e)) and USEPA's implementing regulations establish storage and disposal requirements, including permitting requirements, for PCBs (40 CFR § 761.60 and § 761.65). USEPA's regulations establish a variety of substantive requirements applicable to these activities, including the possible construction of onsite or offsite confined disposal facilities for disposal of PCB-containing materials (i.e., sediment and soil) that would satisfy the requirements of RCRA or TSCA.

The transport of dredged or removed materials is subject to the Hazardous Materials Transportation Act (49 USC § 5101 et seq.) and its implementing regulations (40 CFR Parts 171-180). The shipping of hazardous materials must comply with the substantive requirements of these regulations. Detailed activities to comply with these regulations will be presented, as necessary, in remedial action planning documents for each Area.

3.5 Impacts to Endangered Species

Section 10(a) of the Endangered Species Act (ESA; 16 USC § 153) requires that an Incidental Take Permit be obtained if an action may result in a harm (or “take”) of a threatened or endangered species. USFWS is the permit issuing authority. To obtain a permit, the applicant must develop a Habitat Conservation Plan designed to offset any harmful effects the proposed activities might have on the species.

Pursuant to Part 365 (Michigan ESA) of NREPA, “(u)pon good cause shown and where necessary to alleviate damage to property or to protect human health, endangered or threatened species found on the state list compiled pursuant to section 36503 and subsection (3) may be removed, captured, or destroyed, but only as authorized by a permit issued by the department pursuant to part 13. Carnivorous animals found on the state list may be removed, captured, or destroyed by any person in emergency situations involving an immediate threat to human life, but the removal, capture, or destruction shall be reported to the department within 24 hours of the act.” As part of the SRI/FS study for each Area, an evaluation of threatened and endangered species will be conducted and the substantive requirements of the ESA and Part 365 of the NREPA will be complied with during the design and implementation of remedial action.

3.6 Air Emissions

The Clean Air Act (CAA) (42 USC § 7401 et seq.) establishes several programs applicable to “major” stationary sources of air pollutants. These include the National Ambient Air Quality Standard program, new source control programs (CAA § 111) establishing New Source Performance Standards, Prevention of Significant Deterioration (PSD), and New Source Review (NSR), as well as the operating permit program established under Title V of the CAA (42 USC §§ 7661-7661f). All these programs, except for the Title V program, establish substantive requirements to limit emissions from regulated sources. It is unlikely that any of these programs will apply to the potential Site remedial action. Most of the potential air emissions associated with GRAs will come from mobile sources (e.g., dredgers, booster pumps, trucks engines) which are not regulated as stationary sources. Further, any processing facilities would not likely qualify as a major stationary source under these programs.

In addition to the stationary source programs, federal projects in regions designated as non-attainment or maintenance areas for criteria air pollutants under the CAA are required, in certain circumstances, to prepare a “conformity determination” to assess the consistency of the project with the applicable State Implementation Plan (40 CFR § 51.853). These requirements only apply if pollutant emissions from the project equal or exceed established thresholds.

Further, certain projects, or portions thereof, are exempt from the conformity determination requirement. These exemptions include “(d)irect emissions from remedial and removal actions carried out under CERCLA to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations under CERCLA” (40 CFR 51.853(d)(5)). Because remedial action does not trigger these programs, this exemption excludes the remedial action from the conformity determination requirement established under USEPA’s regulation.

A Permit To Install may be required when operating an *ex situ* treatment facility (e.g., thermal desorption system). MDEQ administers Air Quality Permits to Install pursuant to Part 55 of NREPA (Air Pollution Control). These permits are required for installation, construction, reconstruction, relocation, or modification of any process or process equipment, including control equipment pertaining thereto, which may emit an air contaminant, except for a process or process equipment exempted from this requirement under R 336.1279 through R 336.1290 of the Michigan Air Pollution Control Rules.

3.7 Local Laws

It is possible that county or municipal laws or ordinances may require licenses or permits for the construction or operation of sediment processing facilities, use of publicly owned areas, or installation of temporary facilities. These laws may also impose zoning and construction requirements. Because the potential remedial action will be performed under CERCLA, such licenses or permits may not be needed. Further, to the extent that such local requirements conflict with, and present an obstacle to, the performance of the remedy, they may be preempted by CERCLA.

The Site stretches through Kalamazoo County and Allegan County. Based on a preliminary review of available municipal ordinances and regulations, the potential remedial activities may be subject to local permit requirements for soil erosion and sediment control, working in roadway rights-of-way, sewer discharges, and building construction or demolition. Analyses of the substantive requirements of local laws and ordinances potentially applicable to these activities, including an evaluation of the extent to which such requirements should be addressed, will be performed as part of the Area-specific FS process. The results of these analyses will be discussed with USEPA and MDEQ to determine whether and how these requirements should be addressed in the final remedial design. Local authorities will be consulted to address any concerns arising from the local laws to the extent that those concerns or laws impose substantial burdens on operating the remedial action facilities or equipment.

4. References

ARCADIS. 2008a. Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Multi-Area Feasibility Study Technical Memorandum: Preliminary Remedial Technology Screening. February 2008.

ARCADIS. 2008b. Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Multi-Area Feasibility Study Technical Memorandum: Preliminary List of Possible Applicable or Relevant and Appropriate Requirements. February 2008.

ARCADIS. 2009 . Generalized Conceptual Site Model for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Generalized CSM). May 2009.

MDEQ. 2005. Permit And Licensing Guidebook. June 2005. Retrieved February 2008 from <http://www.deq.state.mi.us/documents/deq-ess-permits-permitguidebook.pdf>.

USEPA. 1988a. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA Interim Final. Office of Emergency and Remedial Response. (OSWER Directive 9355.3-01).

USEPA. 1988b. CERCLA compliance with Other Laws Manual. Part I. Interim Final. Office of Emergency and Remedial Response. (OSWER Directive 9234.1-01).

USEPA. 1989. CERCLA Compliance with Other Laws Manual. Part II. Interim Final. Office of Emergency and Remedial Response. (OSWER Directive 9234.1-02).

USEPA. 2005. Contaminated Sediment Remediation Guidance for Hazardous Waste Sites. OSWER 9355.0-85. EPA-540-R-05-012. USEPA Office of Solid Waste and Emergency Response. December 2005.

USEPA. 2007. Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study, CERCLA Docket No. V-W-07-C-864. United States Environmental Protection Agency Region 5. Effective February 21, 2007.

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Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Multi-Area Feasibility Study Technical Memorandum: Preliminary Permitting/Equivalency Requirements

Table 1 -- Preliminary Permitting/Equivalency Requirements

General Response Action/ Technology	Permit	Law	Citation	Implementing Agency			Requirement Synopsis and Applicability
				Federal	State	Local	
Sediment Removal/Capping Source Control/Bank Stabilization Hydraulic Modification <i>In Situ</i> Containment	Section 10 Permit	Rivers and Harbors Act of 1899 Section 10 (33 USC 401 et seq.)	33 CFR 403; also see 72 CFR 11092	U.S. Army Corps of Engineers (USACE)	-	-	Construction or obstruction in navigable waters of the United States.
	Inland Lakes and Streams Permit	Clean Water Act (CWA) (33 USC 1251 et seq.) Section 404	33 CFR 320-330	USACE ^(a)	Michigan Department of Environmental Quality (MDEQ) / Land and Water Management Division (LWMD)	-	Dredged and fill discharges to the waters of the United States Activities that require a permit under Part 325 (Submerged Lands), Part 303 (Wetlands), or Part 31 (Floodplains and Floodways) of the NREPA do not require separate permits.
		Part 301 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) (Inland Lakes and Streams)	R324.30101-30113	-	MDEQ / LWMD	-	Any construction, dredging, or filling of any part of a lake or riverbed, upland channeling, or any structural interference with the flow of the water. All activities involving dredge or fill of bottomlands, construction, enlargement, extension, removal, or placement of structures on bottomland. Activities which require a permit under Part 325 (Submerged Lands), Part 303 (Wetlands), or Part 31 (Floodplains and Floodways) of the NREPA do not require separate permits.
	Great Lakes Bottomlands Permit (Letter of Approval for vegetation removal only)	Part 325 of NREPA (Great Lakes Submerged Lands)	324.32501-324.32516	-	MDEQ / LWMD	-	Any dredging, filling, modifying, constructing, enlarging, or extending of structures in Great Lakes waters or below the ordinary high water mark (OHWM) of the Great Lakes; or connecting any natural or artificial waterway, canal, or ditch with any Great Lake including Lake St. Clair; or constructing a marina requires a Great Lakes Bottomlands Permit.
	Rule 97 Certification of Approval	Part 31 of NREPA (Floodplains and Floodways)	324.3104	-	MDEQ / Water Bureau (WB) / Surface Water Assessment Section	-	Projects requiring the addition of a material to a water of the state for the purpose of water resource management projects require departmental approval.
	Incidental Take Permit	Endangered Species Act Section 10(a) (16 USC § 1531 et seq.)	50 CFR Part 17, Subpart I and 50 CFR Parts 217, 220, and 222.	-	United States Fish & Wildlife Service	-	An action resulted in a harm (or "take") of a threatened or endangered species. To obtain a permit, the applicant must develop a Habitat Conservation Plan designed to offset any harmful effects the proposed activities might have on the species.
		Part 365 of NREPA (Michigan Endangered Species Act)	324.36505	-	MDEQ	-	Pursuant to Part 365 (Michigan Endangered Species Act) of NREPA, "(u)pon good cause shown and where necessary to alleviate damage to property or to protect human health, endangered or threatened species found on the state list compiled pursuant to section 36503 and subsection (3) may be removed, captured, or destroyed, but only as authorized by a permit issued by the department pursuant to part 13. Carnivorous animals found on the state list may be removed, captured, or destroyed by any person in emergency situations involving an immediate threat to human life, but the removal, capture, or destruction shall be reported to the department within 24 hours of the act."

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Table 1 -- Preliminary Permitting/Equivalency Requirements

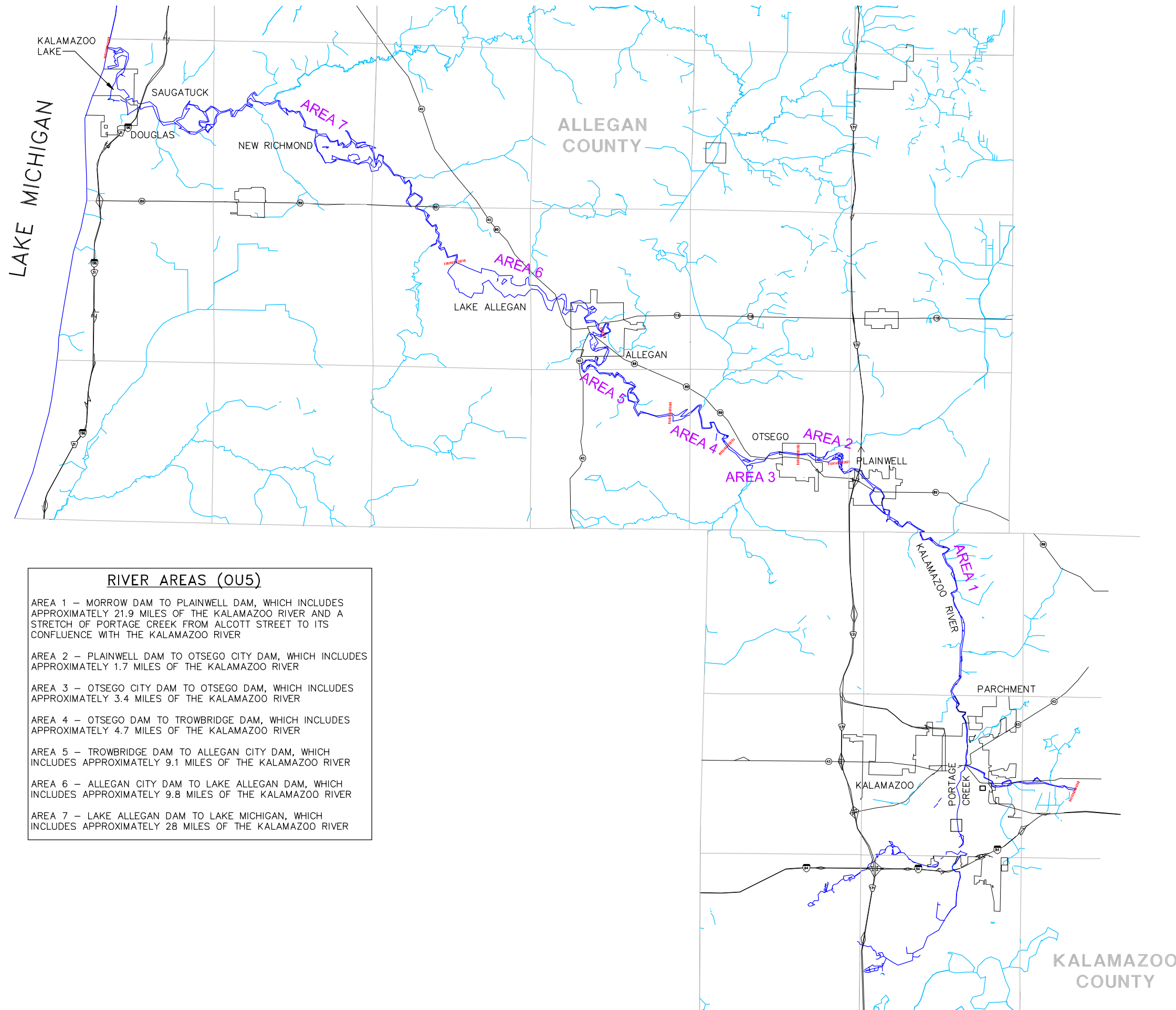
General Response Action/ Technology	Permit	Law	Citation	Implementing Agency			Requirement Synopsis and Applicability
				Federal	State	Local	
Sediment/Bank Soil/Flood Plain Soil Removal Source Control/Bank Stabilization Hydraulic Modification <i>In Situ</i> Containment	Wetland Protection Permit Letter of Approval (for vegetation removal only)	CWA (33 USC 1251, et seq.) Section 404	33 CFR 320-330	USACE ^(a)	MDEQ / LWMD	-	Any projects on or in regulated wetlands.
		Part 303 of NREPA (Wetlands)	324.30306	-	MDEQ / LWMD	-	Any projects on or in regulated wetlands. Activities to dredge, fill, drain surface water, or construct, operate, or maintain any use or development in a wetland under the authority of Part 303 of the NREPA.
	Permit for Construction in a High Risk Erosion Area Permit for Construction in a Flood Risk Area Permit for Construction or Alteration in an Environmental Area	Part 323 of NREPA (Great Lakes Shorelands)	324.32301-324.32315	-	MDEQ / LWMD	May fall under the local jurisdiction such as the presence of a local ordinance.	In the absence of an approved local ordinance, any person or agency must first apply for and obtain a permit from the MDEQ when proposing to dredge, fill, grade, or otherwise alter the soil, alter the natural drainage, or alter the vegetation on a parcel or property within a designated environmental area boundary.
	Wetland Protection Permit Exemption Letter of Approval	CWA (33 USC 1251, et seq.) Section 404	33 CFR 320-330	USACE ^(a)	-	-	The following beach maintenance activities in areas below the OHWM, but above the water's edge, are exempt from the permit requirements: Leveling of sand in areas that are predominately free of vegetation; grooming the top 4 inches of soil without disturbing plant roots; manual de minimus vegetation removal; mowing vegetation to not less than 2 inches in height in an area up to 100 feet wide, or the property's lake frontage, whichever is less; and constructing a walkway, no more than 6 feet wide at base, directly from the upland to the shore across swales with standing water. Permit requirements for filling, dredging, and placement of permanent structures below the OHWM are discussed on Page 1 of this Table (Great Lakes Bottomlands Permit).
		Part 303 of NREPA	Wetland Protection	-	MDEQ / LWMD	-	
		Part 325 of NREPA	Great Lakes Submerged Lands	-	MDEQ / LWMD	-	
	Critical Dune Areas Permits	Sand Dune Protection and Management (Michigan NREPA Part 353)	R324.35301 - R324.35326	-	MDEQ / LWMD	-	The Sand Dune Protection and Management provisions of NREPA require a permit in areas identified as critical dunes for activities including development, silviculture, and recreational activities. Essentially, anything that causes contour changes or significantly alters the physical characteristic of the dunes in a critical dune area requires a permit.
Floodplain and Bank Soil Removal Hydraulic Modification <i>In Situ</i> Containment/Capping	Floodplain Permit	Part 31 of NREPA (Floodplains and Floodways)	No title specified in the Act, commonly referred to as the "Floodplain Regulatory Authority"	-	MDEQ / LWMD	-	Any occupation, construction, filling, or grade change within the floodplain of a river, stream, or drain, including bridge and culvert construction.

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General Response Action/ Technology	Permit	Law	Citation	Implementing Agency			Requirement Synopsis and Applicability
				Federal	State	Local	
Water Management	National Pollutant Discharge Elimination System (NPDES) Permit	CWA, 33 USC 1251, et seq., Section 402	40 CFR 122	USEPA(a)	MDEQ / WB	-	Discharge permits must regulate water discharges consistent with federal effluent limitation guidelines and other requirements of federal law and state water quality standards. Discharge permits may be issued as a "Substantive Requirements Document" for CERCLA sites.
		Part 31 of NREPA (Floodplains and Floodways)	324.3104; 324.3108; 324.3121; 324.3123; 324.3124	-	MDEQ / WB	-	
	Pretreatment Permit	Clean Water Act (CWA) (33 USC 1251 et seq.) Section 401	40 CFR 121	-	MDEQ / WB	If the discharge is directed to local sewer system and Public Owned Treatment Works (POTW)	Discharge of effluent, runoff, leachate, or treated groundwater from a disposal facility for sediments. If any stream or process water is handled, treated, and/or discharged back into the stream then a NPDES permit is required.
Storm Water Management	Soil Erosion and Sedimentation Control (SESC) Permit	Part 91 of NREPA (Soil Erosion and Sedimentation Control)	R323.1701-233.1717	-	MDEQ / WB / SESC Program	Local Municipality may have joint authority with MDEQ	All human-made earth change in the natural cover or topography of land, including cut and fill activities, which may result in or contribute to soil erosion or sedimentation of the waters of the state. If an earth change disturbs an area of one acre or more, or if the earth change is within 500 feet of the water's edge of a lake or stream, a permit is required.
		Part 31 of NREPA (Floodplain and Floodways)	R324.3121; R323.2190 (Michigan Permit-by-Rule for Construction Activities)	-			
Dam Removal/Repair Hydraulic Modification	Dam Safety Permit	Part 315 of NREPA (Dam Safety)	Dam Safety	-	MDEQ / LWMD	-	Any construction, repair, enlargement, removal, alteration, or abandonment of a regulated dam.
<i>Ex Situ</i> Treatment	Air Quality Permit to Install	Part 55 of NREPA (Air Pollution Control)	R336.1201 (Rule 201)	-	MDEQ / Air Quality Division (AQD)	-	Installation, construction, reconstruction, relocation, or modification of any process or process equipment, including control equipment pertaining thereto, which may emit an air contaminant, except for a process or process equipment exempted from this requirement under R 336.1279 through R 336.1290 of the Michigan Air Pollution Control Rules. A Permit To Install may be required when operating <i>ex situ</i> treatment facility (e.g., thermal desorption system).
Sediment/Soil Treatment, Storage, and Disposal	Waste Treatment, Storage, and Disposal Facility Permit	Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.) Part 111 of NREPA (Hazardous Waste Management Facility Operating License)	40 CFR 257-258, 260-268	USEPA	MDEQ	-	Storage, treatment, and disposal of any hazardous materials.
	TSCA Waiver	Toxic Substances Control Act (TSCA) (15 USC 2601 et seq.)	40 CFR 761	USEPA	-	-	Transport, handling, and disposal of polychlorinated biphenyl-contaminated sediments or residue.

Figure

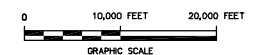


NOTES:

1. ALLEGAN AND KALAMAZOO COUNTY MAPPING OBTAINED FROM MICHIGAN RESOURCE INFORMATION SYSTEM.

LEGEND:

LIMITS OF RIVER AREAS WITHIN OU5



KALAMAZOO RIVER STUDY GROUP
ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE
**MULTI-AREA FEASIBILITY STUDY
TECHNICAL MEMORANDUM**

AREAS OF THE SITE

FIGURE
1